



INSTALLATION: CFE PLUS P3 HLDF-VIDEO

WHAT IS THE CFE PLUS

The CFE-Plus (Canbus Function Extender Plus edition) is an add-on CPU (Computer) for your Volvo. Since it acts as another CPU in your Volvo, the CFE Plus is capable of adding functions. (See the CFE Product page on our website for details on all possible functions).

The CFE Plus comes as an OBD dongle. (OBD is On Board Diagnostics; a connector available at the doorside of the steeringwheel, behind a small hatch).

For Volvo's of the P3 type (V70, XC70, S80 MY 2007 – 2011) a more or less special extra feature has been made available; controlling the HLDF (which is the Volvo's original RTI Navigation screen) in such a way that a direct hookup of for example a reversing- and-or front-camera or external video player/navigation device/mirrorcast/airplay device is possible without any additional interface!

This manual describes how to connect and control this extra feature and how to connect a device to the HLDF.

KNOWLEDGE/TOOLS AND EXTRA'S REQUIRED

To be able to connect any device to the HLDF you'll need at least the following tools and extra's.

* Fishbone tool * Torx 20 screwdriver * Size 8 and 10 wrench (alternatively : flat bottom pliers)
Preferably also Volvo specific tool with partnumber : 9512943 or an alternative tool to remove the cover around the HLDF.



In case you do not have the tool mentioned above (or a similar tool) available, we strongly suggest to ask your local Volvo dealer for support on removal of the panel around the screen (See installation procedure 'step 1')!

Instruction# 1800H	Version# 1.01	Part# VT-1800	EAN# 871932411542	Author: BE
--------------------	---------------	---------------	-------------------	------------



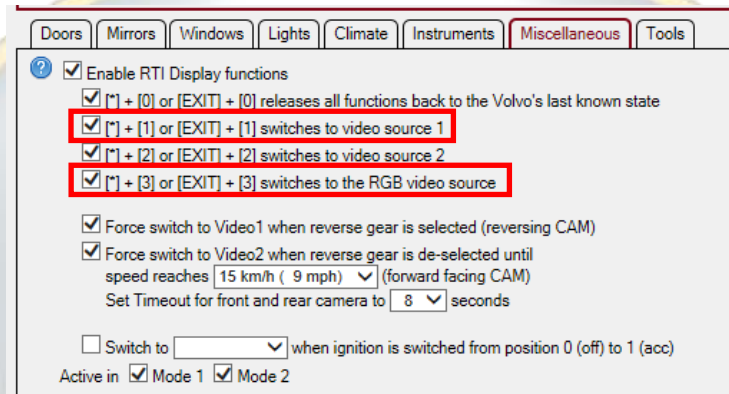
INSTALLATION MANUAL

CFE-Plus P3 HLDF Video



FIRST STEPS

First make sure the CFE Plus is configured with the options for controls of the HLDF (RTI Display functions) are enabled according to your requirement, but with at least (for testing purposes) the manual controls [*] + [1] and [*] + [3] options enabled.



Connect the CFE Plus to your Volvo as you would do normally , make sure initialisation is finished and then press [* Auto] and at the same time button [1] (or alternatively [EXIT] and at the same time [1]). The HLDF should switch over from displaying the RTI navigation to the video-1 source (nothing connected to that source yet), which should result in a dark black screen. (Backlight might be visible).



Pressing [*] and at the same time button [3] (or alternatively [EXIT] and at the same time button [3]) should make the HLDF switch over back to the RTI navigation.



If that works as explained, all is setup right in the CFE Plus and you can continue the installation.

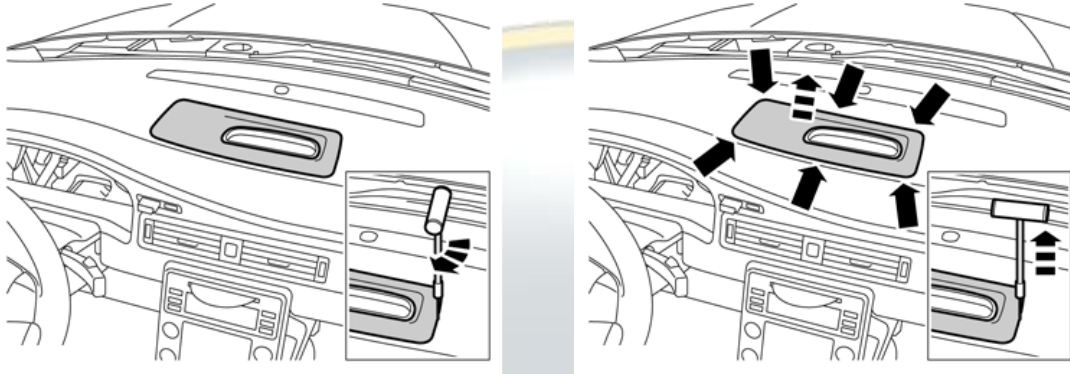
Instruction# 1800H	Version# 1.01	Part# VT-1800	EAN# 871932411542	Author: BE
--------------------	---------------	---------------	-------------------	------------



INSTALLATION PROCEDURE

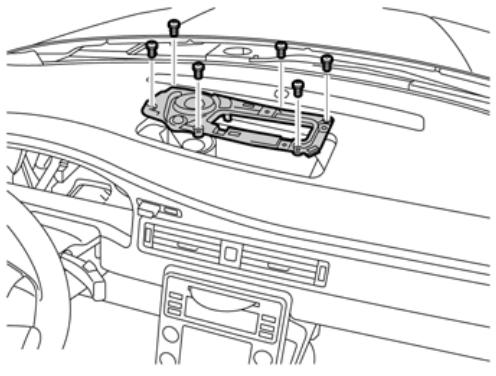
Independent of what will be connected to the available video sources on the HLDF, the HLDF has to be temporarily removed from the bracket.

Step 1 : Remove the cover.



- 1 -> Insert the tool with the bottom part in parallel with the side to be lifted out.
- 2 -> Once inserted properly, turn the tool so that the angled part points to the centre of the panel.
- 3 -> Carefully but firmly pull up until you feel the panel come loose. Repeat at all sides and corners. (be careful not to touch the windscreen when pulling! Keep one hand above the tool to avoid hitting the windscreen!)

Step 2 : remove the bracket holding the HLDF (and optionally the centre speaker)



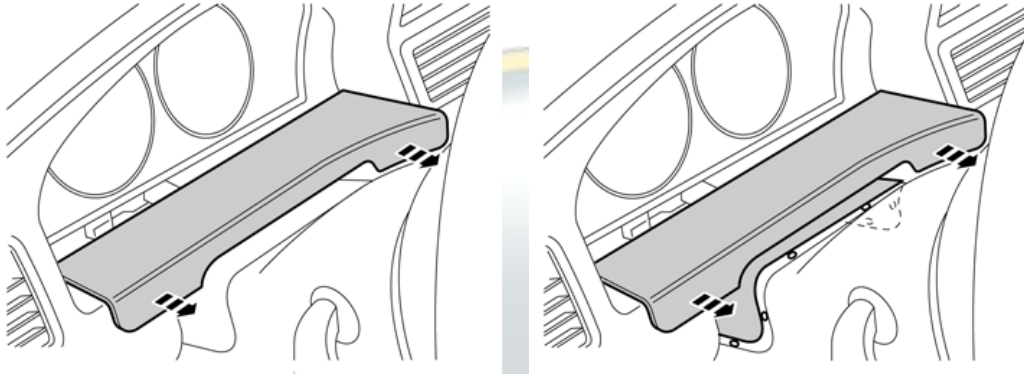
- 1 -> remove the 6 torx (size 20) screws.
- 2 -> pull out the panel holding the screen
- 3 -> remove connectors from screen (and optionally from the centre speaker).

Instruction# 1800H	Version# 1.01	Part# VT-1800	EAN# 871932411542	Author: BE
--------------------	---------------	---------------	-------------------	------------

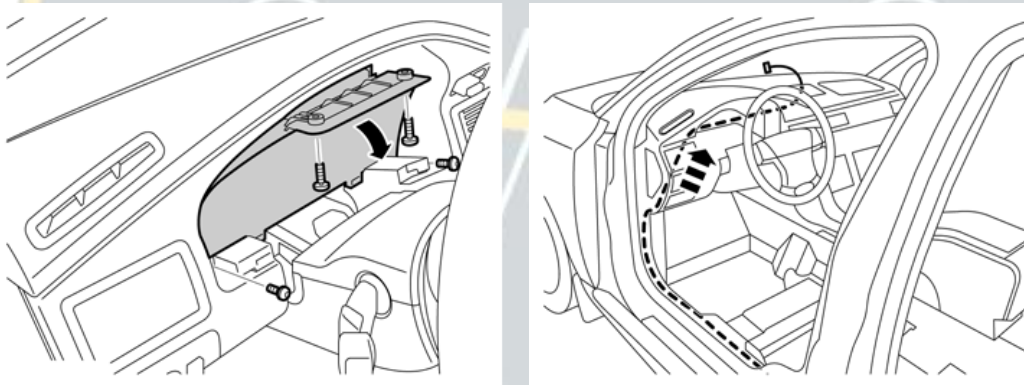


Step 3: Remove either the DIM (Driver Information Module) or Glove compartment
(depending on the device to be installed, you can choose to guide wires to the HLDF from the Driver- or Passenger side!)
In case a frontcam is going to be mounted, removing the glove compartment is required.

**** Removing the DIM:**



- 1 -> pull the lower panel forward.
- 2 -> lift the panel at the steeringwheel cover. (held with 6 clips)

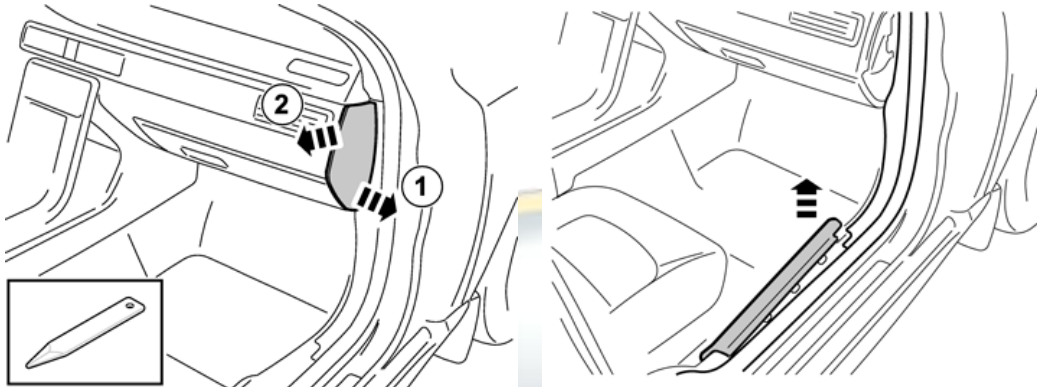


- 1 -> Remove the 4 torx (size 20) screws
- 2 -> Pull the DIM forward and out after tilting it down towards the steeringwheel axel.
- 3 -> disconnect the DIM and remove it.
- 4 -> guide any video harness towards the HLDF as suggested.

Instruction# 1800H	Version# 1.01	Part# VT-1800	EAN# 871932411542	Author: BE
--------------------	---------------	---------------	-------------------	------------

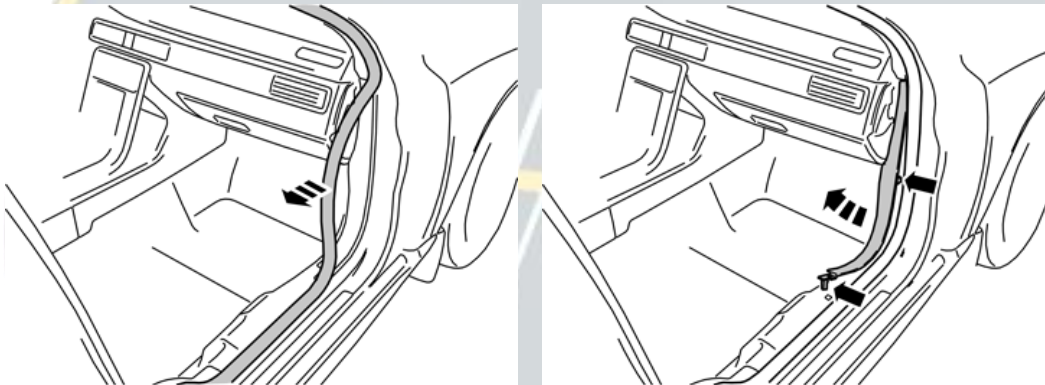


**** Removing the glove compartment:**



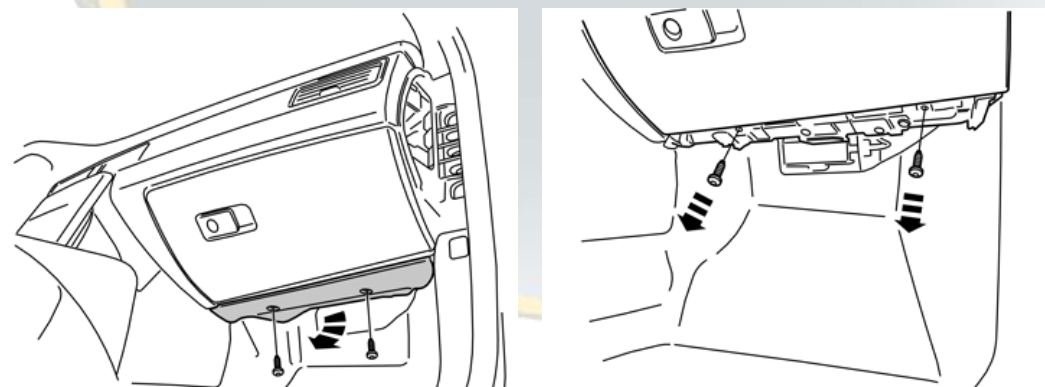
1 -> Remove the side panel, using a fishbone tool OR open glove compartment first then pull on the side of the panel (1) and pull out (2).

2 -> Remove the protective step-in cover, only pull up at the front side! (back side facing part will only allow pulling forward!)



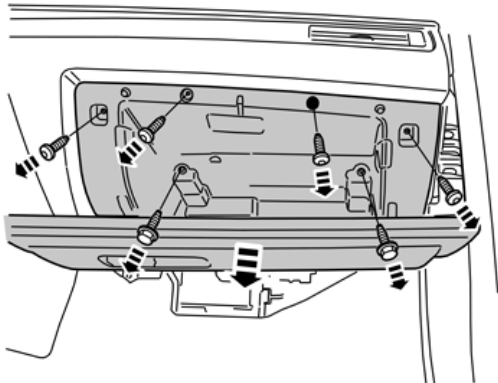
1 -> Pull the rubber away, at least so far that the plastic cover (right image) is free

2 -> Remove the side cover by pulling up and towards the back of the car to release the clips, then move the panel inwards to remove it.



1 -> Remove the 2 torx (size 20) screws and remove the panel.

2 -> Remove the 2 torx (size 20) screws.



- 1 -> Open the glove compartment and remove the torx screws (size 20) and the 2 bolts (size 8)
- 2 -> Take the glove compartment out by pulling towards the back of the car and tilting it a bit up and down.

**** In case a front camera is mounted, access to the engine bay can be found BEHIND the CEM or BELOW the CEM.**

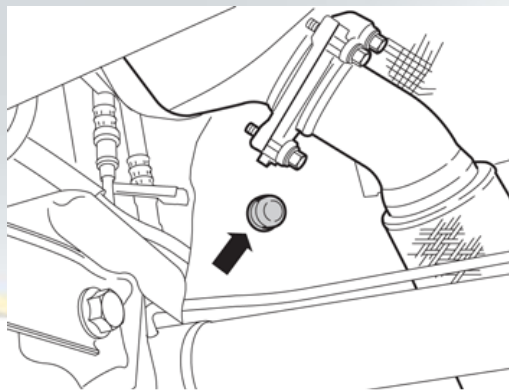
The CEM is the Central Electronics Module, to be found behind the glove compartment. The CEM also holds the fuses. Behind the CEM : dry area below the windscreen wipers in the engine bay. Rather easy to reach without lifting the car. Below the CEM : wet area in engine bay next to exhaust pipe (passenger side) directly accessing the cabin. Car needs to be lifted to reach that point in the engine bay.



Dry area (reachable without lifting the car)



Wet area (car needs to be lifted to reach the rubber in the engine bay)



**Step 4: Make connections to the HLDF**

Connections of the device(s) to the HLDF are made to the Green (Video 1) and brown (Video 2) ports.

The grey (RGB) and blue (12V+/Gnd and canbus) are in use by the HLDF itself and the RTI navigation computer.

Any device (globally, so region independent!) to be connected to one of the available ports offer a Composite NTSC signal output.

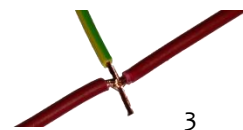
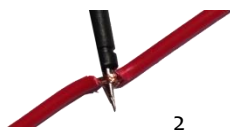


1 -> Connect video sources to the green and brown connector. (If camera's were bought with VolvoTech.EU, a matching connector has been supplied, alternatively the connector with conversion to RCA is available separately at VolvoTech.EU)

2 -> When returning the screen into its bracket, please be careful with the harnesses, the bracket is matching the size of the screen and does not give any space for extensive wiring. Always guide wires to the open part (following original harnesses) and from there choose the direction to go (Direction DIM or direction of the glove compartment).

Howto; in case you need to connect a hookup-wire to an existing wire in the car:

Strip (1) the wire to be connected to at a place where you can reach it good enough to make an 'eye' (2) with a sharp object and to put the CFE Plus cable (3) through, twist it and cover it with isolation tape.



Instruction# 1800H	Version# 1.01	Part# VT-1800	EAN# 871932411542	Author: BE
--------------------	---------------	---------------	-------------------	------------